The Dipterous Family Canaceidae in the United States

By Marshall R. Wheeler, Austin, Texas

There are four known species of this family in the United States, one of them undescribed. No key for the recognition of these species has been published and distributional data for the described species is very meager. The following key to the genera and species has been prepared from actual specimens and is followed by a discussion of the known distribution and a description of the new species, *Canaceoides texensis.*

All of the species of Canaceidae are associated with sea coast regions and are most often taken by sweeping among barren rocks which are occasionally wetted by sea spray or high tide. The group has long been placed with the Ephydridae and the Zoological Record still includes them in that family. They are deserving of family rank, however, and have been so treated by Curran (1934) and by Brues and Melander (1945). The family characters described in these publications are partially incorrect for our species of *Canaceoides* but are applicable to those of *Canace.*

Key to the U. S. Genera and Species of Canaceidae

1. A single pair of frontal bristles present, aligned with the anterior ocellus; acrostichal hairs absent; no prescutellar bristles.....Genus Canaceoides Cresson.....2

Several pairs of convergent frontals present, anterior to ocelli and arranged along the margins of the large frontal triangle; acrostichals well developed; prescutellars present .....Genus Canace Haliday.....3

2. Disc of scutellum with a pair of bristles in addition to the usual 4 marginals; anterior notopleural bristle present as a small hair; mostly dark species.....*Canaceoides nudata* (Cresson)

Scutellum with only the 4 marginals, the disc bare; anterior notopleural absent; more or less whitish pruinose species .....*Canaceoides texensis* n.sp.

3. Frontal triangle dull pollinose, not at all shining; more than two large upturned buccal bristles, the lower one not aligned with the regular facials; fore femora without a series of short spines

on inner apical surface. . . . CANACE *sensu strictu* (the genotype, *Canace nasica* Haliday, from Europe, belongs here)

Frontal triangle shining; the lowermost of the two upturned buccal bristles about in line with the facials; fore femora armed with a row of short, stout spines on inner apical surface . . . . . "Canacea" group (see discussion below) 4

4. Face densely silvery pollinose; fore femora with 4–6 stout spines; front weakly produced between antennal bases . . . . . *Canace macateei* Malloch

Face dull golden yellow; fore femora with 8–12 stout spines; front rather strongly produced between antennal bases . . . . . *Canace aldrichi* Cresson

Discussion and Distribution

CANACE Haliday

1839. Ann. Nat. Hist., 3: 411.
Genotype: *Ephydra nasica* Haliday.

Malloch (1924) first described a species of this genus from the United States but in his title the generic name was spelled *Canacea* and his introductory sentence states that "The genus *Canacea* is distinguished from other Ephydridae by the presence of a complete anal cell in the wing," thus giving rise to considerable speculation as to whether this constitutes erection of a new genus.

Cresson (1924) states that *Canacea macateei* ". . . is the genotype of Malloch's? genus *Canacea,* which is not congeneric with *Canace*. . . ." Curran (1934), however, states that he was ". . . informed by Mr. Malloch during a conversation several years ago that *'Canacea'* was a slip of the pen, that he had no intention of establishing a new name, and that he was extremely doubtful that his species differed generically from *Canace* Haliday." Curran states further that he can find nothing in the descriptions to warrant the recognition of *Canacea.*

Cresson (1936), nonetheless, in describing a new species allied to *macateei,* states that in his opinion *Canacea* was introduced validly, though apparently unintentionally, and held that should this group (i.e., the species keying to the "Canacea" group of the above key) prove to warrant recognition, then *Canacea* Malloch, 1924, might be used.

It is the writer's opinion that in view of Malloch's statement, cited by Curran, that *Canacea* was a *lapsus,* the spelling should be emended to *Canace,* the intended form. The fact that the species concerned may actually be generically different has no bearing on this matter of the name. Such an interpretation seems to be in accord with Opinions 26, 27, 41, 63 and others of the International Commission on Nomenclature.

Canace macateei Malloch, 1924. Proc. Ent. Soc. Wash., 26: 52.

Described from a large series from Jekyl Island, Georgia. Cresson (1924) states that he had specimens from several eastern states as well as one from California. Dr. A. H. Sturtevant has specimens from Georgia and Massachusetts, and has identified specimens in the Cornell collection from Kingsville, Texas. The writer has taken specimens from several points along the Texas coast.

Canace aldrichi Cresson, 1936. Tr. Am. Ent. Soc., 62: 264.

Described from five specimens from Palo Alto and Redwood City, California. The writer and Dr. Sturtevant have taken a number of specimens at several coastal localities in southern California.

CANACEOIDES Cresson

1934. Tr. Am. Ent. Soc., 60: 221.
Genotype: *Canace nudata* Cresson.

In establishing this genus Cresson indicated that it might be the same as *Procanace* Curran, 1934, which name was, however, preoccupied by *Procanace* Hendel, 1913, for a Formosan species. Curran (*op. cit.*) substituted *Neocanace* Curran for *Procanace* Curran *nec* Hendel. The writer is not in a position to confirm or deny the synonymy.

Nocticanace Malloch (1935), from the description, is very likely the same as *Canaceoides* and its type, *N. peculiaris* Malloch, from the Marquesas Islands, is apparently quite similar to *C. texensis,* n.sp., described below. A footnote to Malloch's

article indicates that it was first issued in February, 1933, as Publication 7 of the Pacific Entomological Survey, and hence Malloch's name has priority should the identity of the two be clearly established.

Canaceoides nudata (Cresson), 1926.

Canace nudata Cresson, 1926. Tr. Am. Ent. Soc., 52: 257.

Described from 13 specimens from Los Angeles County, California. Cresson (1934) reports that 42 specimens from Hawaii seem to be conspecific. He also states that this species may be the same as *Procanace* (i.e., *Neocanace*) *panamaensis* Curran (1934. Proc. Calif. Acad. Sci., 21: 161).

The writer has taken several specimens along the coast of southern California.

Canaceoides texensis, sp. nov.

Front gray pollinose, narrowed anteriorly; about 3 large orbital bristles on each side, curving over eyes, and 1–2 smaller hairs alternating with the bristles. One pair of large, proclinate frontal bristles, their bases nearly level with the anterior ocellus, slightly nearer the ocellus than the nearest eye margin. One pair of divergent ocellars and about 6–8 small scattered hairs on the ocellar area. Inner and outer verticals well developed; postvertical bristles absent.

Face, cheeks and clypeus whitish pruinose, nearly snowy white except for pink areas below and in front of lowest point of eyes. Face broadly carinate between antennae, flattened below and lacking bristles. Bucca greatly broadened below and behind eyes, bearing 4 bristles, the 1st directed forward toward mouth, the others turned up over the eyes, the middle one smaller. Proboscis dark gray pollinose, the palpi elongate, yellowish and bearing one strong terminal bristle.

Mesonotum grayish pollinose dorsally, becoming whitish pruinose over pleurae and humeri. Acrostichal hairs and prescutellar bristles absent. Four pairs of dorsocentrals, the 1st

pair presutural and with 5–8 small hairs laterally and anteriorly to them. Scutellum with 4 marginals, the basal pair arising rather far up on the disc, all 4 of about equal length, the disc otherwise bare. One strong humeral and several scattered hairs on humeri, anterior notopleural absent, posterior notopleural a little stronger than humeral. Presutural and alars well developed. Mesopleura with 3 bristles, one directed dorsally, one posteriorly and one ventrally, plus small scattered hairs; sternopleura with one dorsal bristle and a row of small hairs. Halteres pale yellow.

Abdomen uniformly grayish pollinose, somewhat whitish in certain aspects. Legs gray pollinose: fore femora without a series of spines along inner apical surface; all metatarsi as long as the combined distal tarsal segments of each leg.

Wings uniformly grayish, veins dark. Costa reaching 4th vein; costal margin spinose. Interval between apices of 2nd and 3rd veins about $\frac{4}{5}$ that between 3rd and 4th; the latter veins parallel at their apices (somewhat diverging in *nudata*); posterior crossvein slightly less than $\frac{1}{2}$ length of last section of 5th vein; 2nd section of 4th vein about $\frac{1}{2}$ length of 3rd (last) section.

Body length, male: 2.2 mm. (in pinned specimen); wing: 1.8 mm. Female larger than male; body length up to 2.7 mm.

Types.—Holotype male (deposited in the collection of the Calif. Acad. Sciences) and two *paratype* females (author's collection) collected by the writer near Galveston, Texas, Sept., 1950. Dr. Sturtevant has identified a specimen from Brazoria Co., Texas, in the collection of the University of Kansas (female, Aug. 10, 1928, R. H. Beamer) as this species.

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A New Species of the Genus Euplaniceps (Hymenoptera: Psammocharidae) from California with Microphotographs of the Genitalia of the Two Males of the Genus

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This specimen turned up in a small collection of spider wasps forwarded by P. A. Arnaud, Jr. There is no question as to its location in this genus, since Bradley's paper gives a very excellent description of the genus and keys to the various genera of the tribe as well as keys to the species. Bradley states that the only male known in this genus is *Euplaniceps sausseri* (Kohl), from Chile. The writer has a series of this species in both sexes, and microphotographs of the genitalia and subgenital plate are shown in the plates. Bradley's key to the males (p. 85) locates this male in the genus exactly, but it is probable that his key to the females would have to be modified to the extent that his statement that the wings are banded (p. 83, couplet 1b) would have to be eliminated since the wings of this male are hyaline with no trace of bands. Since the spurs of *E. sausseri* (Kohl) in the male are white, he suggested that this character might be distinctive or vary with the species. Since the spurs in this species are dark, it will be seen that it varies with the species.

Evans' key is incorrect in stating that in the tribe Aporini the propodeum of the male is excavated behind and the sides of the concavity project backward in short vertical ridges. Neither of the two males in this genus has that character, but the propodeum is flat behind, not excavated, and with no ridges, corners